

SIX NEW TREES AND SHRUBS FROM TROPICAL NORTH AMERICA (a)

C. L. Lundell

MAYTENUS GUATEMALENSIS Lundell, sp. nov.

Frutex 1.3-metralis, 3 cm. diam. Folia subcoriacea, oblongo-elliptica vel elliptica, 3.8--7 cm. longa, 1.4--3 cm. lata, apice acuminata, acumine obtusiusculo, basi late cuneata, obscure et minute crenulato-serrulata, nervia lateralibus utrinque 7--9; petiolo 1.5--3 mm. longo. Inflorescentiae fasciculatae, axillares; pedicellis ca. 5 mm. longis. Capsula monosperma, obovoidea, ca. 11 mm. longa.

A glabrous shrub, 1.3 m. high, about 3 cm. in diameter; branchlets slender, wiry, angled. Leaves subcoriaceous, oblong-elliptic or elliptic, 3.8 to 7 cm. long, 1.4 to 3 cm. wide, apex abruptly acuminate, the acumen obtusish, base broadly cuneate, obscurely and minutely crenulate-serrulate, costa slightly elevated on both surfaces, main lateral veins 7 to 9 on each side, visible but faint on both surfaces; petioles canaliculate, 1.5 to 3 mm. long. Infructescence fasciculate in the axils; pedicels about 5 mm. long, sometimes solitary (?). Persistent calyx 5-dentate, the teeth broadly deltoid, about 0.5 mm. long, about 1.3 mm. wide. Capsules obovoid, about 11 mm. long, 2-celled with 2 erect ovules in each cell, 1-seeded.

Type in the Herbarium of the University of Michigan, W. A. Schipp S-635, collected in swampy forest shade, at Camp 35, British Honduras - Guatemala boundary survey, Toledo district, at alt. of about 750 m., June 10, 1934.

MAYTENUS SCHIPPPII Lundell, sp. nov.

Arbor 8--10-metralis, 13--23 cm. diam. Folia subcoriacea, obovato-elliptica vel elliptica, 5--11.5 cm. longa, 2.3--5.4 cm. lata, apice abrupte acuminata, acumine obtuso, basi late cuneata, crenulato-serrulata, nervis lateralibus utrinque 7--11; petiolo 6--9 mm. longo. Infructescentiae fasciculatae, axillares; pedicellis 4--6 mm. longis. Capsula obovoidea, 9--12 mm. longa. Semina 1--3; cotyledonibus suborbicularibus, ca. 7 mm. longis, basi biappendiculatis; radícula parva, ca. 0.5 mm. longa.

A glabrous tree 8 to 10 m. high, 13 to 23 cm. in diam., with cream-colored wood (Schipp); branchlets slender, wiry, slightly angled. Leaves thinly subcoriaceous, obovate-elliptic or elliptic, 5 to 11.5 cm. long, 2.3 to 5.4 cm. wide, apex abruptly acuminate, the acumen obtuse, base broadly cuneate, finely crenulate-serrulate, sometimes very obscurely so, costa elevated on both surfaces, main lateral veins 7 to

11 on each side, finely prominulous on both surfaces, veinlets openly reticulate; petioles canaliculate, 6 to 9 mm. long. Infructescence fasciculate in the axils; pedicels 4 to 6 mm. long. Persistent calyx 5-dentate. Capsules bright orange (Schipp), obovoid, 9 to 12 mm. long, 2-celled, with 2 erect ovules in each cell, 1- to 3-seeded, eril red. Endosperm of seed abundant; cotyledons thin, equal, suborbicular, inequilateral, about 7 mm. long, bearing a minute appendage at base on each side; radicle small, about 0.5 mm. long.

Type in the Herbarium of the University of Michigan, W. A. Schipp 1014, collected in shade in swampy places, at "Dixie", Punta Gorda, Toledo District, British Honduras, alt. about 65 m., Sept. 26, 1932.

Additional specimens examined: BRITISH HONDURAS: Toledo District, Rio Grande, alt. 15 m., in swamp forest or on river banks, Schipp 1224, Nov. 18, 1933.

M. Schippii is closely related to M. guatemalensis Lundell, but differs in being a tree with larger, usually obovate-elliptic rather than oblong-elliptic leaves, and with petioles more than twice as long.

MAYTENUS TEXANA Lundell, sp. nov.

Frutex. Ramuli minute puberuli. Folia crassa, pallida, oblongo-elliptica vel obovato-elliptica, 1.6--3.1 cm. longa, 9--18 mm. lata, apice late obtusa vel rotundata, minute apiculata, basi rotundata, subintegra, enervia, costa basi prominula; petiolo crasso, 1--3 mm. longo, parce et minute puberulo. Flores dioeci, fasciculati. Pedicelli 2 mm. longi vel minores. Calyx quinquefidus, lobis rotundatis, ca. 0.65 mm. longis. Petala 5, ovata, 1.2--1.5 mm. longa, lineati-punctata. Ovarium 3- raro 4-loculare. Cvulum in loculis solitarium. Capsula obovoidea, ca. 12 mm. longa. Semina 1--3, arillata.

A shrub, much-branched; branchlets usually short, rather thick, very minutely puberulent. Leaves thick, very pale, ashy gray when dry, oblong-elliptic or obovate-elliptic, 1.6 to 3.1 cm. long, 9 to 18 mm. wide, apex broadly obtuse or rounded, usually minutely apiculate, base rounded, entire below, subentire above, usually with 2 or 3 minute teeth on each side, venation obscure, costa prominulous at base only; petioles stout, 1 to 3 mm. long, sparsely and minutely puberulent. Flowers dioecious, fasciculate in the leaf axils; pedicels less than 2 mm. long. Staminate flowers: Calyx 5-lobed, the lobes rounded, about 0.65 mm. long, very minutely erose-ciliolate, punctate. Petals 5, ovate, 1.3 to 1.5 mm. long, erose at apex, lineate-punctate. Filaments subulate, about 0.6 mm. long. Anthers broadly cordate, rufous punctate dorsally. Pistillate flowers: Petals smaller, about

1.2 mm. long, rufous-punctate. Stamens rudimentary. Disk large, flat. Ovary usually 3-celled, sometimes 4-celled, with one erect basal ovule in each cell. Capsules obovoid, about 12 mm. long, 3- or 4-celled, 1- to 3-seeded; aril red; seed lineate, oblong-obovoid, about 5 mm. long; endosperm present; cotyledons oblong-elliptic, about 2.8 mm. long, rounded at apex and base, flat; radicle about 0.8 mm. long, acutish.

Type in the Herbarium of the University of Michigan, Elzada U. Clover 986, collected in mesquite woods, between Los Fresnos and Fort Isabel, Cameron Co., Texas, April 22, 1933.

Additional specimens examined: TEXAS: Cameron Co., Los Fresnos, in heavy brush, Clover 1731, Feb. 8, 1934; common in the lower Rio Grande valley.

The oblong-elliptic or obovate-elliptic, short-petiolate leaves rounded at the base, and the smaller rufous-punctate flowers distinguish M. texana from M. phyllanthoides Benth., its closest relative. In the latter, the leaves are obovate, cuneate at the base, larger, and have much longer petioles.

EUGENIA TOLEDINENSIS Lundell, sp. nov.

Arbor 15 m. alta, 30 cm. diam.; ramulis ut videtur novellis rufo-tomentosis, demum glabris. Folia 5--6 mm. longe petiolata, subcoriacea, adulta glabra, oblonga, 9.5--12.5 cm. longa, 2.8--4.1 cm. lata, apice obtuse acuminata, basi acuta. Pedunculi et pedicelli rufo-tomentosi, crassi, 2--5 mm. longi, axillares. Fructus globosus, ca. 2 cm. diam., rufo-tomentosus.

A tree 15 m. high, 30 cm. in diam.; branchlets rather slender, apparently rufous-tomentose at first, glabrous with age. Leaves thin, subcoriaceous. Petioles stout, terete, 5 to 6 mm. long. Leaf-blades narrowly oblong, 9.5 to 12.5 cm. long, 2.8 to 4.1 cm. wide, apex obtusely acuminate, base acute, glabrescent with age, costa slightly raised above, prominent beneath, reticulate-veined on both surfaces, main lateral veins 12 to 15 on each side, widely ascending, nearly horizontal to midrib, anastomosing into submarginal veins, conspicuous on both surfaces. Pedicels solitary or several in a short raceme, axillary, the peduncles and pedicels stout, 2 to 5 mm. long, rufous-tomentose. Fruits globose, about 2 cm. in diam., rufous-tomentose, crowned by persistent rufous-tomentose calyx-lobes.

Type in the Herbarium of the University of Michigan, W. A. Schipp S-644, collected on creek bank in forest shade at Camp 23, British Honduras - Guatemala boundary survey, Toledo District, British Honduras, at alt. of about 600 m., Feb. 16, 1934.

Eugenia toledinensis apparently is related to E. xalapen-

ais (HBK.) DC.

EUGENIA VACANA Lundell, sp. nov.

Arbor 5 cm. diam.; ramulis novellis rufo-tomentosis, demum glabratiss. Folia subcoriacea, anguste elliptico-oblonga, 2.5--4.5 cm. longa, 1--1.7 cm. lata, apice obtuse acuminata, basi cuneata, juventute parce rufo-tomentosa, maturitate glabra; petiolis 2--3.5 mm. longis. Flores breviter racemosi, ut videtur fasciculati. Pedicelli graciles, 4--8 mm. longi, parce rufo-tomentosi. Calycis lobi inaequales, ovati, 1--1.5 mm. longi. Petala orbicularia, 2.8--3.4 mm. longa, ciliata.

A tree; diam. 5 cm.; branchlets slender, reddish, at first loosely rufous-tomentose, puberulent or glabrescent with age; internodes 1 to 1.8 cm. long. Leaves subcoriaceous, narrowly elliptic-oblong, 2.5 to 4.5 cm. long, 1 to 1.7 cm. wide, apex acuminate, the acumen obtuse, base cuneate, loosely rufous-tomentose on both surfaces at first, glabrescent early, costa impressed above, prominent beneath, the veins obsolete above, faint beneath; petioles canaliculate, 2 to 3.5 mm. long. Flowers white, very shortly racemose, appearing fasciculate. Pedicels slender, 4 to 8 mm. long, loosely rufous-tomentose. Calyx pubescent, 4-lobed, the lobes ciliate, ovate, unequal, 1 to 1.5 mm. long, rounded or broadly obtuse. Petals 4, orbicular, 2.8 to 3.4 mm. long, ciliate.

Type in the Herbarium of the University of Michigan, Percy H. Gentle 2535, collected on hillside opposite Vaca, El Cayo District, British Honduras, April 30, 1938; vernacular name "walk naked".

Of the species in the Yucatan Peninsula, its closest ally appears to be E. bumelioides Standl., which has ovate or elliptic broader leaves with denser darker tomentum. The local name, alluding to the smooth brownish or reddish trunk, is applied to several other British Honduras eugenias.

OSMANTHUS MEXICANA Lundell, sp. nov.

Arbor 6--7 m. alta, 25 cm. diam. Folia glabra, coriacea, anguste lanceolata vel oblanceolata, 4--9 cm. longa, 1--2.4 cm. lata, apice caudato-acuminata, acumine anguste obtusiusculo, basi acuminata, nigripunctata, costa supra impressa; petiolo gracili, 1--1.8 cm. longo. Inflorescentiae axillares, anguste paniculatae, 1.5--3 cm. longae. Calycis lobi 4. Corolla puberulenta, ca. 4 mm. longa, ad mediam partem coalita, lobis late ovatis vel suborbicularibus, rotundatis. Ovarium glabrum, biloculare. Fructus ellipsoideus, ca. 13 mm. longus, 8 mm. diam.

A tree 6 to 7 m. high, and 25 cm. in diam.; branchlets erect, glabrous, slender, with short internodes. Leaves opposite, coriaceous, glabrous, narrowly lanceolate or oblanceo-

late, 4 to 9 cm. long, 1 to 2.4 cm. wide, apex caudate-acuminate, the acumen narrowly obtusish, base acuminate, decurrent on the petiole, densely black-punctate, costa slightly impressed above, prominent beneath, main lateral veins 4 to 6 on each side, nearly obsolete; petioles slender, 1 to 1.8 cm. long. Panicles of pistillate flowers axillary, narrow, small, 1.5 to 3 cm. long, each node bibracteate, sparsely and minutely puberulent, glabrescent. Flowers sessile or subsessile, the pedicels less than 1 mm. long. Calyx small, 4-lobed, the lobes triangular, about 0.6 mm. long, puberulent above, ciliolate. Corolla puberulent, densely so above, about 4 mm. long, 4-lobed to the middle, the lobes broadly ovate or suborbicular, rounded. Staminodes 2. Ovary glabrous, 2-celled, with 2 ovules in each cell. Style stout, about 1.5 mm. long. Stigma capitate, large. Fruits ellipsoid, about 13 mm. long, 8 mm. in diam.

Type in the Herbarium of the University of Michigan, Eizi Matuda 2023, collected on Cerro Laguna, Mapastepec, Chiapas, Mexico, Jan. 1938.

By its small narrow caudate-acuminate leaves, blackened when dry, costa impressed above, and large stigma, O. mexicana may be readily distinguished from the two other American species.

(a) Papers from the Herbarium of the University of Michigan.

ADDITIONAL NOTES ON THE ERIOCAULACEAE -- I

Harold N. Moldenke

On December 1, 1937, I published a discussion of the Eriocaulaceae of North America in North American Flora 19: 17--50. The editorial policy of this flora, however, is such that one is in many cases not permitted to give complete synonymy, complete lists of published illustrations in the case of abundantly illustrated species, or any lists of examined material. Of these the most serious omission is that of the citation of herbarium material examined, for only by a consultation of such a list of cited material can future workers retrace the steps of a monographer and see actually on what he based his concept of any given genus, species, or variety. Lists of examined material are also invaluable in showing exactly what is known of the geo-